GIS Theme Manager

Users Manual

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National Park Service
GIS Theme Manager
V2.04

Developed Jointly by:

Alaska Support Office
GIS Team

Inventory and Monitoring
Program

I&M
Inventory and Monitoring

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GIS Theme Manager Background

The GIS Theme Manager was developed by the Alaska Support Office and has been used throughout the Alaska Region for 5 years. In FY 1999, the Inventory and Monitoring Program looked at the GIS Theme Manager for packaging park base cartography, vegetation, geology, and soil data. The GIS Theme Manager would be a "one stop shopping experience" for data on a service-wide basis.

The GIS Theme Manager is an ArcView extension that facilitates the organization and use of data themes. It allows users to create lists of themes that are relevant to particular projects, areas, or management issues. It catalogs the themes, so that a user simply selects a theme from a pop-up list and the GIS Theme Manager adds it to a view with a descriptive title, displays it with a legend, perhaps adds hotlinks or help files, and links it to metadata.
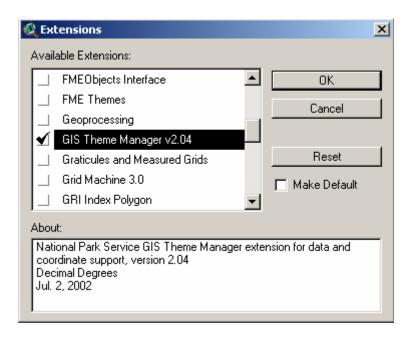
Theme lists may be maintained for all park users on a network location that is created by service-wide programs like the Inventory and Monitoring Program and sent to parks. Individuals may create their own personal lists for their data or specific projects. The GIS Theme Manager wizards guide users through the process allowing them to easily create, edit, copy, and delete theme lists. Users can also create a set of environmental variables for theme source paths, so that theme lists can be shared with other users who may have data stored on different drives or with somewhat different directory structures.

The GIS Theme Manager also provides extra coordinate handling capabilities. By specifying the data and view projections, the user can click on the view and return the location in latitude-longitude coordinates. One can also zoom to a latitude-longitude coordinate and display the point on the view.

1. Turning on the GIS Theme Manager

The GIS Theme Manager is an ArcView extension that extends the functionality of the program like an extension or plug-in for any other program.

- Open ArcView
- Click on *File → Extensions*. A window opens that shows all of the available extensions. Check the box next to the GIS Theme Manager extension. Click 'OK'

The GIS Theme Manager is now turned on. Throughout ArcView are several new buttons, tools, and menus.
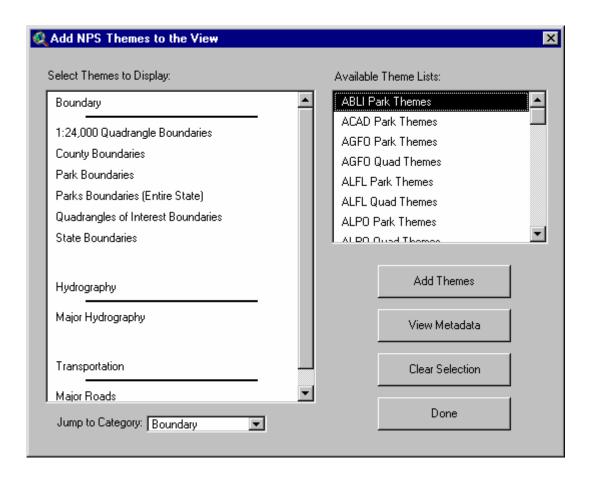
Select the ArcView Help tool and then select any of the GIS Theme Manager options. This takes you directly to the help page for that option. Alternatively, the help file can be accessed by clicking on the *Help → GIS Theme Manager Help Topics.*

General information about the GIS Theme Manager can also be found by clicking on the *Help → About GIS Theme Manager Extension.*

2. Adding Data to the View

You will now deal with the data.

- Click on the 'Add NPS Themes' button. You will notice that there is at least one theme list in the right box. These theme lists are set up by the parks' GIS person, the regional office or can be from the NPS I&M program (See Administrator Manual).
- Click on any of the themes that are listed in the left hand box to select that theme. You can move around the list of themes by using the scroll bar. You can also move around by using the 'Jump to Category' field at the bottom of the window. This will give you a list of all the categories available and will move the list of themes to display that category.

- Click 'Add Themes' and themes you have selected will be added to your view.
- To select more than one theme at a time, hold down the Shift button and click on multiple themes. Notice that this selects individual themes from the list; it does not select all themes between your first and last selection.
- Notice that the themes are added to the view with legends and descriptive names. Also, the 'Add NPS Themes to the View' window remains open so that you can add more data. This window can be closed by clicking 'Done'
- Turn on the themes in the view to display the data.

Add more data to make the view more useful to your needs.

Some of the data in the theme list may be raster data. In order to view this data properly, you will need to turn on the 'Spatial Analyst' extension if available. If the 'Spatial Analyst' extension is not turned on, the raster data will be added as an image. Common types of raster data are Digital Elevation Models, Slopes and Aspect. Other extensions may need to be turned on as well, dependent upon your data.

When you add a theme, it goes to the top of the list of themes. Because items are displayed on the screen from the bottom up, you may not see some of the data from the lower themes on the list. To rearrange the display order, grab one of the theme titles with

the cursor and move it up or down. When you release the mouse button, the theme is moved.

3. Viewing Metadata

There are two ways to view metadata with the GIS Theme Manager.

1. You can view the metadata before bringing a theme into a view. Click on the 'Add NPS Themes' button. Select a theme. Click the 'View Metadata' button. This displays the metadata for any selected theme(s).
2. You can view the metadata of themes already in a view. In the view, activate a theme and click the 'Metadata' button. This brings up the metadata of the active theme.

Metadata files will only be linked for themes added to the view with the GIS Theme Manager.

4. Feature Report or Description Files

Occasionally an associated report or more detailed description on the features is available for certain themes. These reports and textual descriptions can be linked to the theme with a Windows help file or HTML document. The I&M Program will create these descriptive files and link them to the themes for most of its inventories.

- A theme has an associated report or textual description linked to it if the 'Show Map Unit Description' button is not grayed out when a theme is active.
- If you click on one of the features in the theme the report opens to the section of the report that describes that feature.

With a windows help file, you can click on the 'Contents' button, and get to the Table of Contents for the report. You can go to the next or previous page by clicking on the arrow buttons. You can also go to any page by clicking on the green underlined text. These are hotlinks to various pages. You can also click 'Index' and get a keyword search of the report. You can do a full text search by clicking on the 'Find' tab and then 'Maximize search capabilities' followed by 'Next' and then 'Finish.' Information on creating a Windows Help File can be found by contacting Microsoft for a help file compiler.

With an HTML file, you can navigate by scrolling going to the top of the document and using the linked table of contents.
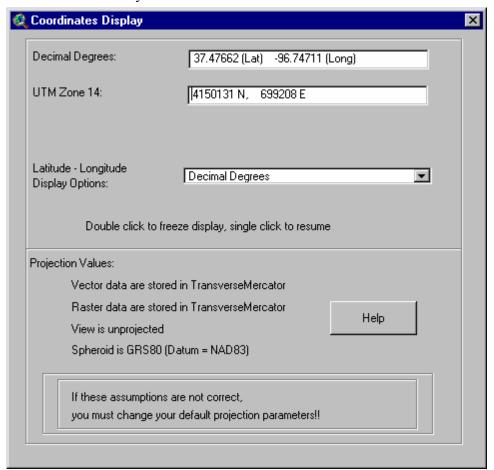
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5. Hot Links

Additional functionality was added to the GIS Theme Manager by automatically creating hotlinks for specified themes. You can link large graphics, small graphics, one or many graphics, text, documents and other ArcView projects. When a theme with established hotlinks is added, a window opens up that says it has hotlinks. This aids in knowing which themes have additional data.

- When a theme is added that has a hotlink already established, a window will pop up that says that a hot link is established for the theme.
- To view the hotlink, make the theme with the hot link active.
- Click the hotlink button ![lightning bolt icon] and then click on of the features of the theme. A window opens and displays an image or other relevant data linked to that feature.

6. Return Cursor Coordinates

If you want to find the coordinates of a point, you can hold the cursor over the point and see the coordinates in the upper right corner. However, these coordinates are in UTM and are occasionally hard to comprehend. If you want these points in latitude and longitude, a tool exists to allow you to do this.

- Click the 'Return Cursor Coordinates' ![xy icon] button and select a point on the view. A window opens that displays the coordinates of the cursor. The Decimal Degrees coordinates are displayed at the top of the window. This is followed by the UTM coordinates.

- An important aspect of this window is the projection information. You need to know what projection and datum your data is in and you must check this information on this window to ensure that you are getting the proper coordinates.
- **If the projection information is not set correctly, you must follow the directions outlined in the** *Administrator Manual: Changing Default Projection* **to set it correctly, or look in the online-help information.**
- As you move the cursor, the coordinates change. If you double click on the view, the coordinates freeze and display the location that you double clicked. These coordinates stay frozen until you click in the view again.
- Notice that the displayed coordinates are in Decimal Degrees. If you want to see the coordinates in Degrees Minutes Seconds, click 'Decimal Degrees' on the field to the right of the 'Latitude-Longitude Display Options.' This provides you with the option to view the data also in Degrees Minutes Seconds or Degrees Decimal Minutes. Selecting any of the options changes the upper coordinates displayed in the window.

7. Return Point Theme Coordinates

If you hold down the lower right corner of the Return Cursor Coordinates, you see it is a drop-down toolbar with another option. This tool can only be selected when a point theme is activated.

'Return Point Theme Coordinates' gives you the coordinates of the point theme over which you placed the cursor.

- Make a point theme active. Click the 'Return Point Theme Coordinates' and click the mouse over one of the points from the point theme. The same window as the 'Return Cursor Coordinate' tool window opens and displays the coordinates of the point you just clicked in.
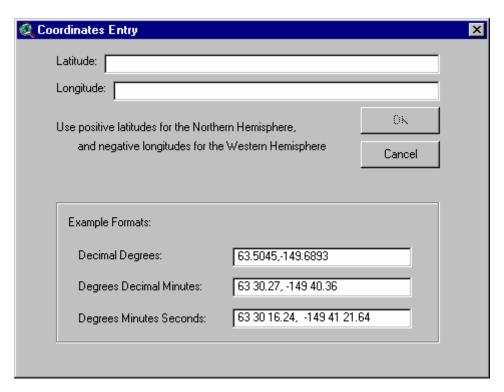
8. Center on Lat Long

If you are looking at a view and want to center the view on a certain coordinate or zoom out to include a certain coordinate.

- Click 'ThemeMgr' → 'Center on LatLong.' This opens a window that prompts you for the coordinates of a point. Enter the desired coordinate. If the point is not currently in the view, a window opens that asks whether you want to zoom to the point or Pan to the point. The 'pan-to-the-point' option moves the view, so that it is centered over the point you entered. The 'zoom to include the point' option zooms out until the point you entered is in the center of the view. If the point is currently in the view, you will not have the option of panning/zooming. The view will automatically pan to the coordinate.

9. Draw Lat/Long Point

If you wish to see where a certain coordinate lies within the view, you can use the Draw Lat/Long Point tool to draw a point at the location of interest.

- Click 'ThemeMgr' → 'Draw LatLong Point.' This opens a window that asks you for the coordinates of the point you want to add to the view.

A point is now drawn on the screen where the coordinates are. The point is a graphic and NOT a GIS theme. You can change the size and symbol of this graphic by selecting it with the pointer and opening the Symbol Window (Ctrl-P, or Window -> Show Symbol Window).

Information on the Administrators Manual

In addition to this Users Guide there is also an Administrators Manual, describes the details of setting up a GIS Theme Manager for a park. The topics that are included in the Administrators Manual are:

Importing Theme List – Importing a theme list created by someone else (other user within park, other park, region, I&M).

Updating Theme List Variables- Using variables for path names instead of actual paths.

Creating a New Theme List – How to create a new theme list that has your data in.

Adding a Theme to a Theme List – Adding a theme to a theme list that already exists.

Editing a Theme List – Changing properties of a theme within an existing theme list.

Advanced Theme Codes – Using Advanced Codes for hotlinks, setting display scales, linking help files to themes.

Changing Default Projection – Changing the projection that is used in a view based on data properties.

Project Theme – Projecting a theme to another projection.

Export Theme List – Creating a .dbf of a theme list to send to another user for their use in the GIS Theme Manager.

Delete a Theme List – Deleting a theme list from the set of theme lists available to a user.

Rename a Theme List – Changing the name of a theme list.

Duplicate a Theme List – Making a duplicate copy of an existing theme list.

Copy To/From Network Themeset – Copying a theme list to and from a network for multiple users to access, without needing multiple copies of the theme list.